

PURCHASE DESCRIPTION

SWR METER

TS2MN-A

1.0 GENERAL This procurement requires a tuned 1 kHz voltmeter/amplifier, calibrated in dB and SWR to be used with square law detectors and slotted lines. The equipment shall also be capable of operating from either an ac line or portable dc power source.

2.0 CLASSIFICATION The tuned voltmeter described herein shall meet the requirements of MIL-T-28800(), Type III, Class 5, Style E, Color R for Navy shipboard, submarine, and shore applications with the following exceptions:

- a. The non-operating temperature requirement is limited to the range of -40°C to +70°C.
- b. The relative humidity requirement is limited to 95% noncondensating.
- c. The operating and non-operating altitude requirements are not invoked.
- d. The EMI requirement is not invoked.

3.0 OPERATIONAL REQUIREMENTS The equipment shall be capable of producing signals within the parameters and accuracies specified herein.

3.1 Frequency Characteristics

3.1.1 Tuned Frequency: 1 kHz

3.1.2 Bandwidth: At least 15 Hz to 120 Hz

3.2 Measurement Characteristics

3.2.1 Dynamic Range: At least 70 dB

3.2.2 Attenuator Accuracy: ± 0.05 dB/10 dB step

3.3 Input Impedance Characteristics

3.3.1 Unbiased Range: At least 50-200 ohms

3.3.2 High Impedance: 2.5 k Ω to 10 k Ω

3.3.3 Bolometer: Low or high current into 200 Ω

3.4 Output For Driving X-Y Recorder: At least 0 to 1 Vdc

3.4.1 Source Impedance: 1000 ohms

3.4.2 Connector: BNC female

3.5 Meter Scales (calibrated for square-law detectors)

3.5.1 SWR: At least 2 ranges, 1 to 4 and 3.2 to 10

3.5.2 dB: At least 0 to 10

4.0 GENERAL REQUIREMENTS

4.1 Power: 115/230 Vac $\pm 10\%$, single phase, 50, 60 or 400 Hz $\pm 10\%$, 5 VA maximum, or rechargeable battery for portable operation, at least 24 hours continuous operation per charge

4.2 Calibration Interval: The calibration interval shall be 12 months minimum. The equipment shall be within all accuracy requirements specified herein, with a 72% or greater confidence factor following a calibration interval of 12 months.

4.3 Dimensions: The total volume of the unit shall not exceed 530 in³ (8700 cm³).

4.4 Weight: The total weight of the unit shall not exceed 9 lb (4 kg).